Status Report from
SAS 2.0 Zoning Subgroup
(05-277r0)

Heng Liao
SAS 2.0 Zoning Subgroup Conference Calls

• T10 Plenary in April 2005 (Oklahoma City)
  – Presented the original SAS 2.0 zoning proposal (05-144r0/1, 05-186r0), introduced the basic concepts
  – T10 Plenary approved the request to start the SAS2.0 zoning subgroup conference call

• Two SAS 2.0 Zoning Conference calls were held to date
  – Around 20 people joined the each meeting
  – The majority of the discussions were based on the SAS 2.0 zoning proposal (05-144)
    • The subgroup seemed to agree this is a good starting point
    • No major opposition to the basic architecture, the frame format, and the concept for zone management
    • Constructive comments has helped to improve the proposal (captured in 05-144r2/3/4)
  – New independent contribution (05-235r1) proposed enhancement to the (05-144)
1\textsuperscript{st} SAS Zoning conference call (May 13, 2005)

- 20 people joined the call
- Heng Liao presented 05-186r1 (slides) and 05-144r2 (document)
  - Clarify how to handle zone reassignment after device hot plug and device relocation
  - Impact of zone management on traffic – non-disruptive zone reconfiguration
  - How to ensure consistent zone permission table is propagate when multiple supervisor update the table concurrently – election of supervising expander
  - SMP commands improved to support supervising expander election
  - The key points above were well received by the group
- Meeting minutes published (05-195r0)
2nd SAS Zoning conference call (June 16, 2005)

• 13 people joined the call
• Heng Liao presented 05-144r3 (document)
  – Added supervising allowed expander attribute to give supervisor control over the candidacy of the supervising expander
  – The group suggested expanding the supervising allowed attribute to multiple bit priority field to control the preference of supervising expander candidates
  – Many editorial suggestions
• Ed D’Avignon presented 05-235r1
  – Suggestion to enhance SAS 2 zoning by support zoning aware end device (that is not trusted)
  – The group recommend for Ed to propose a usage model to support the enhancement suggestion
• Meeting minutes published (05-250r0)
Summary

• Progress were made in SAS 2.0 zoning
  – 05-144 has been used as the general basis for SAS 2.0 zoning discussion
  – Suggested enhancements were captured in the latest SAS 2.0 zoning proposal (05-144r4)
  – New contributions were discussed in the Subgroup

• The group agreed for
  – Reporting the status/progress to July T10 SAS Prot WG
  – Continue to have conference calls after July T10 plenary meeting
Highlights of 05-144r4

- **Latest SAS 2.0 Zoning proposal**
  - Capture changes suggested by the subgroup from the 2nd conf call

- **Key changes:**
  - Add Supervising Priority (2-bit) to control the priority for supervising expander election
  - Extensive editorial changes suggested by the subgroup:
    - A) The use of order list.
    - B) Change “fabric” to “service delivery subsystem”
    - C) Reference to PHY_RDY state should be modified to use messages or state defined in SAS 1.1 PHY layer state machine.
    - D) Any time a device changes group, broadcast message should be sent to all the affected groups (global, or at minimal, both the original SGID and the new SGID)
    - E) Rather than describing how to calculate the expander change counter and Phy change counter, just have a clear definition on the counter values and who is allowed to see them.
    - F) In the CONFIGURE ZONE PERMISSION command, the OPERATION field should be expanded to 4 bits with reserved code points.
    - G) Remove the description on “all trusted Phy shall be assigned to group 127”.
    - H) Use tables for definition of the code points of a multi-bit fields
    - I) All Ignored in the new commands shall be changed to reserved. Do not use ignored fields defined in SAS1.1